



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,432	07/23/2003	Toshiro Tojo	FUJI 20.526	9820
26304 7590 09/07/2007 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER ZHENG, EVA Y	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 09/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/626,432

Applicant(s)

TOJO ET AL.

Examiner

Eva Yi Zheng

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### *Request for Continued Examination*

1. The request filed on June 21, 2007, for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 10/626,432 is acceptable and a RCE has been established. An action on the RCE follows.

### ***Claim Objections***

2. Claim 7 is objected to because of the following informalities: claim 7 should be depended upon claim 6 instead of claim 8.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable by Swanke (US 5,564,097).

- a) Regarding to claim 1, Swanke disclose a data communication apparatus comprising:

a transmission side (inherent in a communication system); and

a reception side that includes (Fig. 2):

- a spread spectrum processing part that performs spread spectrum process on an input signal (block 208 and 206 in Fig. 2);
- an analog-to-digital conversion part that digitally converts the spread spectrum processed signal (block 214 in Fig. 2); and
- an inverse spread spectrum processing part that performs an inverse spread spectrum process of said spread spectrum process on the digitally converted signal (block 218 in Fig. 2; Col 3, L1-14 and Col 4, L60-62).

Swanke failed to explicitly disclose the digital sampling timing of the spread spectrum processed signal is in sync with an oscillation timing of the spread spectrum processed signal.

However, Swanke depicts a radio receiver comprises a spreader (208) and despreaders (218) in order to remove unwanted signal in Fig. 2. The synchronization circuitry (216) controls clock timing and delay between the spreader and the despreaders (Col 2, L9-11). Since the spreading signal (208) and despreaders signal (218) are synchronized by the synchronization circuitry (216), sampling rate of A/D (214) via CLK signal is also in sync with the local oscillating clock signal that is input to mixer (206). The synchronized spreading and despreaders of a received radio signal is utilized to track desirable signal (Col 2, L26-29). Therefore, it is obvious to one of ordinary skill in art to recognize that the CLK is in synchronization with the local oscillator clock signal (L.O) that is input to mixer (206). By doing so, detect and remove unwanted signal in a spread spectrum receiver.

Art Unit: 2611

b) Regarding to claims 2 and 7, Swanke disclose wherein said spread spectrum process is performed using a predetermined PN sequence (inherent in 208 and 216 in Fig. 2).

c) Regarding to claims 3 and 8, Swanke disclose wherein a PN sequence number of said PN sequence is set to a value that is adequate for substantial improvement in the precision of said analog-to-digital conversion process so that transmission data contained in the input signal can be detected with predetermined precision (216 in Fig. 2).

d) Regarding to claims 4 and 9, Swanke disclose further comprising:

a gain controlling part that performs a signal gain controlling process on an input signal (204 in Fig. 2), wherein said spread spectrum processing part performs a spread spectrum process on a signal that has undergone said signal gain controlling process (block 208 and 206 in Fig. 2).

e) Regarding to claim 6, Swanke disclose a data reception method comprising:

a spread spectrum processing step of performing a spread spectrum process on an input signal (block 208 and 206 in Fig. 2);

an analog-to-digital conversion step of digitally converting the spread spectrum processed signal by sampling the spread spectrum processed signal (block 214 in Fig. 2); and

an inverse spread spectrum processing step of performing an inverse spread spectrum process of said spread spectrum process on the digitally converted signal (block 218 in Fig. 2; Col 3, L1-14 and Col 4, L60-62).

Swanke failed to explicitly disclose the digital sampling timing of the spread spectrum processed signal is in sync with an oscillation timing of the spread spectrum processed signal.

However, Swanke depicts a radio receiver comprises a spreader (208) and despreader (218) in order to remove unwanted signal in Fig. 2. The synchronization circuitry (216) controls clock timing and delay between the spreader and the despreader (Col 2, L9-11). Since the spreading signal (208) and despreading signal (218) are synchronized by the synchronization circuitry (216), sampling rate of A/D (214) via CLK signal is also in sync with the local oscillating clock signal that is input to mixer (206). The synchronized spreading and despreading of a received radio signal is utilized to track desirable signal (Col 2, L26-29). Therefore, it is obvious to one of ordinary skill in art to recognize that the CLK is in synchronization with the local oscillator clock signal (L.O) that is input to mixer (206). By doing so, detect and remove unwanted signal in a spread spectrum receiver.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swanke (US 5,564,097) in view of Kato et al. (US 6,021,137).

Regarding to claim 5, Swanke disclose a communication system comprising:

a transmission side (inherent in a communication system); and

a reception side that includes (Fig. 2):

a spread spectrum processing part that performs spread spectrum process on an input signal (block 208 and 206 in Fig. 2);

Art Unit: 2611

an analog-to-digital conversion part that digitally converts the spread spectrum processed signal by sampling the spread spectrum processed signal (block 214 in Fig. 2); and

an inverse spread spectrum processing part that performs an inverse spread spectrum process of said spread spectrum process on the digitally converted signal (block 218 in Fig. 2; Col 3, L1-14 and Col 4, L60-62).

Swanke failed to (1) explicitly disclose the digital sampling timing of the spread spectrum processed signal is in sync with an oscillation timing of the spread spectrum processed signal; and (2) the teaching of a power line transmission path in the communication system.

However, Swanke depicts a radio receiver comprises a spreader (208) and desreader (218) in order to remove unwanted signal in Fig. 2. The synchronization circuitry (216) controls clock timing and delay between the spreader and the desreader (Col 2, L9-11). Since the spreading signal (208) and despreading signal (218) are synchronized by the synchronization circuitry (216), sampling rate of A/D (214) via CLK signal is also in sync with the local oscillating clock signal that is input to mixer (206). The synchronized spreading and despreading of a received radio signal is utilized to track desirable signal (Col 2, L26-29). Therefore, it is obvious to one of ordinary skill in art to recognize that the CLK is in synchronization with the local oscillator clock signal (L.O) that is input to mixer (206). By doing so, detect and remove unwanted signal in a spread spectrum receiver.

In addition, Kato et al. disclose such a power line functioning as a data transmission path for transmitting data (5 in Fig. 1); and a data transmission apparatus that terminates the power line (1-4 in Fig. 1). It is well known that communication system can be used with power line, wireless, infrared, laser and many other methods. Therefore, it is obvious to one of ordinary skill in art to combine the teaching of power line by Kato et al. in the receiver system of Swanke. By doing so, perform data transmission with better power control.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Zheng whose telephone number is 571-272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



Art Unit: 2611

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eva Yi Zheng  
Examiner  
Art Unit 2611

August 23, 2007

  
CHIEH M. FAN  
SUPERVISORY PATENT EXAMINER